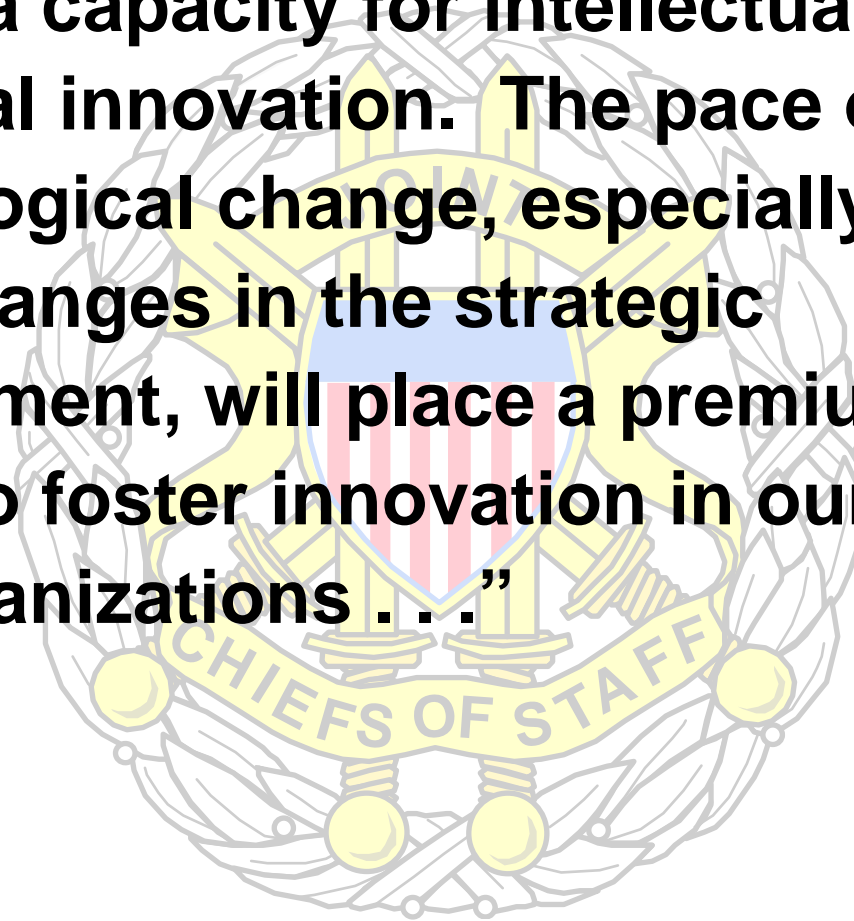


Joint Vision 2020



“ . . . the US Armed Forces will continue to rely on a capacity for intellectual and technical innovation. The pace of technological change, especially as it fuels changes in the strategic environment, will place a premium on our ability to foster innovation in our people and organizations . . . ”





***Transformation Through Technology
Innovation***



***Technical Innovation in Support
of National Security***



Robotics Integrated into the Force

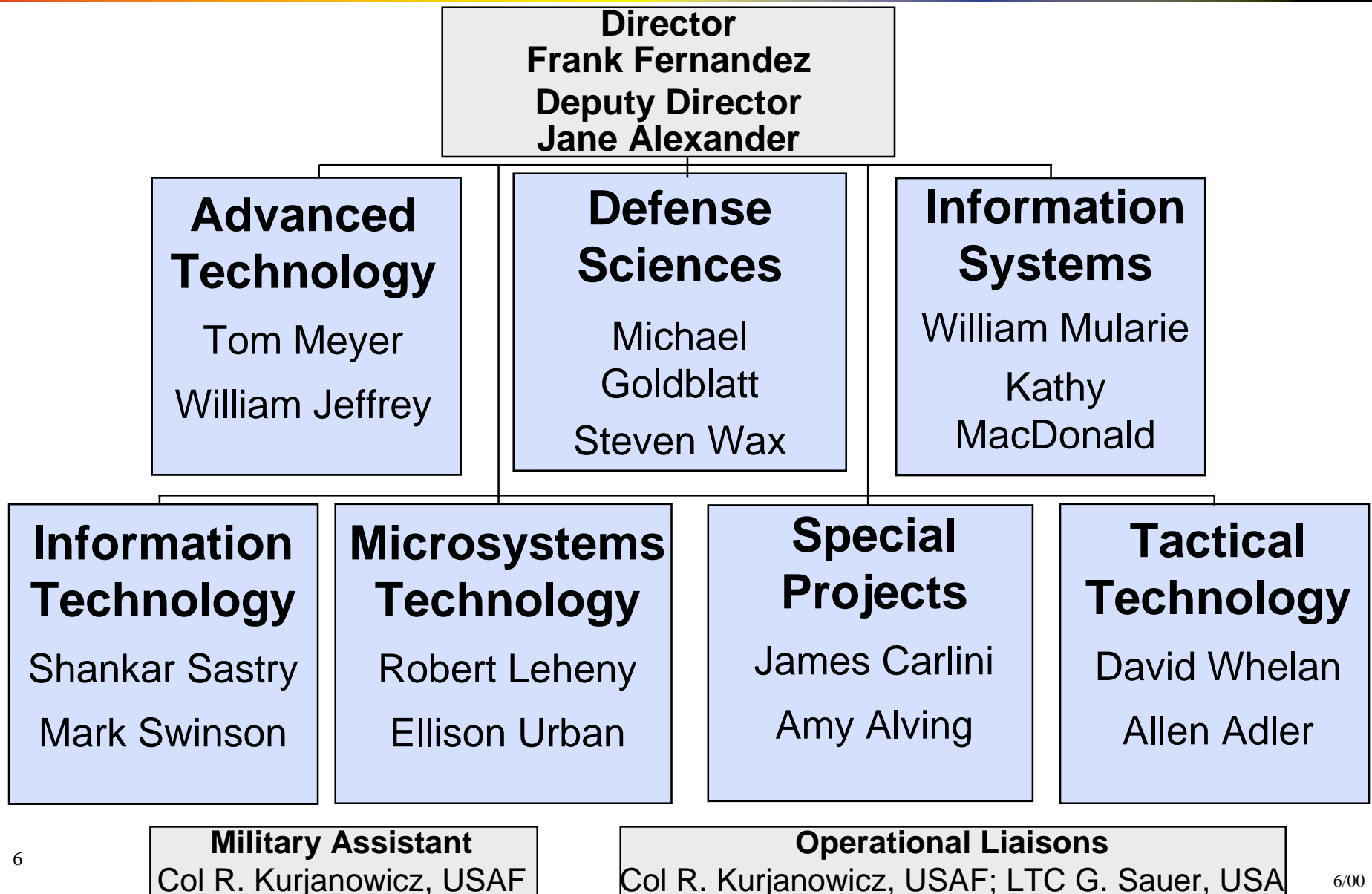
- **Advanced, high-speed networks**
- **Complex system design and operation**
- **Wireless communications**
- **Microcircuits combining information technologies and biological systems**



Unmanned Combat Air Vehicle



DARPA Organization





Advanced Technology Office

**Early Entry, Rapid Reaction Forces and
Special Forces**

Communications

Maritime



Defense Sciences Office



Biological Warfare Defense Technologies

Biology

Materials and Devices

Mathematics



Information Systems Office



Information Assurance and Security

Command and Control

Planning and Logistics

Asymmetric Threat



Information Technology Office



Networking

Embedded and Autonomous Computing

User Interfaces and Translation

Software Composition



Microsystems Technology Office



Electronics
Optoelectronics
MEMS
Combined Microsystems



Special Projects Office



Biological Warfare Defense Systems

Surface and Underground Target Engagement

Sensor and Navigation Systems



Tactical Technology Office



Air, Space, and Land Platforms

Laser Systems

Future Combat Systems

Space-Based Sensors for Surveillance and Targeting

National-Level Problems



- **Protection from Biological Attack**
- **Protection from Information Attack**

Operational Dominance



- **Affordable, Precision Moving Target Kill**
 - Offensive and Defensive
- **Dynamic Command & Control**
 - Mobile Networks
 - Near-Real-Time Planning, Replanning
- **Future Warfare Concepts**
 - Hard and Deeply Buried Target Classification
 - Combined Manned, Unmanned Operations

High-Risk, High-Payoff Technology Exploitation



- **Information**
- **Microsystems**
- **Math**
- **Materials**
- **Intersection of Biology, Information and Microsystems**
- **Beyond Silicon**